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FIG. 1

		LIM 1	
P	MLLEAELDCHRRP	WEGRPQELGGKEIP	CAGCDQHILDRFILKALDRHWHSKCLKCDCHTPLAER
M	MLLEAELDCHRRP	WEGRPQELGGKEIP	CAGCDQHILDRFILKALDRHWHSKCLKCDCHTPLAER
C	MLLEAELDCHRRP	WEGRPQELGGKEIP	CAGCDQHILDRFILKALDRHWHSKCLKCDCHTPLAER
X	MLLEAELDCHRRP	WEGRPQELGGKEIP	CAGCDQHILDRFILKALDRHWHSKCLKCDCHTPLAER
Z	MLLEAELDCHRRP	WEGRPQELGGKEIP	CAGCDQHILDRFILKALDRHWHSKCLKCDCHTPLAER
		LIM 2	
P	CFSRGESLYCKDD	FEKRFEGTKCAACQ	LIGIPPTQVVRRAQDFVYHLHCFACVVCCKRQLATGDEFYLMEDSRL
M	CFSRGESLYCKDD	FEKRFEGTKCAACQ	LIGIPPTQVVRRAQDFVYHLHCFACVVCCKRQLATGDEFYLMEDSRL
C	CFSRGESLYCKDD	FEKRFEGTKCAACQ	LIGIPPTQVVRRAQDFVYHLHCFACVVCCKRQLATGDEFYLMEDSRL
X	CFSRGESLYCKDD	FEKRFEGTKCAACQ	LIGIPPTQVVRRAQDFVYHLHCFACVVCCKRQLATGDEFYLMEDSRL
Z	CFSRGESLYCKDD	FEKRFEGTKCAACQ	LIGIPPTQVVRRAQDFVYHLHCFACVVCCKRQLATGDEFYLMEDSRL
		HOMEODOMAIN	
P	VCKADYETAKQREAE	ATAKRPRTTITAKQ	LETLSAYNTSPKPARHVREQLSETGLDMRVVQVWFQNRRA
M	VCKADYETAKQREAE	ATAKRPRTTITAKQ	LETLSAYNTSPKPARHVREQLSETGLDMRVVQVWFQNRRA
C	VCKADYETAKQREAE	ATAKRPRTTITAKQ	LETLSAYNTSPKPARHVREQLSETGLDMRVVQVWFQNRRA
X	VCKADYETAKQREAE	ATAKRPRTTITAKQ	LETLSAYNTSPKPARHVREQLSETGLDMRVVQVWFQNRRA
Z	VCKADYETAKQREAE	ATAKRPRTTITAKQ	LETLSAYNTSPKPARHVREQLSETGLDMRVVQVWFQNRRA
		LIM 3	
P	KEKRLKKDAGRQ	RWGQYFRNMKRRAR	GGSKSDKDSVQEEGQDSDAEVSFTDEPSPMAEMGPANGLYGGGLGEPA
M	KEKRLKKDAGRQ	RWGQYFRNMKRRAR	GGSKSDKDSVQEEGQDSDAEVSFTDEPSPMAEMGPANGLYGGGLGEPA
C	KEKRLKKDAGRQ	RWGQYFRNMKRRAR	GGSKSDKDSVQEEGQDSDAEVSFTDEPSPMAEMGPANGLYGGGLGEPA
X	KEKRLKKDAGRQ	RWGQYFRNMKRRAR	GGSKSDKDSVQEEGQDSDAEVSFTDEPSPMAEMGPANGLYGGGLGEPA
Z	KEKRLKKDAGRQ	RWGQYFRNMKRRAR	GGSKSDKDSVQEEGQDSDAEVSFTDEPSPMAEMGPANGLYGGGLGEPA
		LIM 4	
P	PALGRPSGAPGS	FPLEHGG*LAGPEQ	YGELRPSSPYGVPSPPAALQSLPGPQLLSSLVYPEAGLGLV*PA
M	PALGRPSGAPGS	FPLEHGG*LAGPEQ	YGELRPSSPYGVPSPPAALQSLPGPQLLSSLVYPEAGLGLV*PA
C	PALGRPSGAPGS	FPLEHGG*LAGPEQ	YGELRPSSPYGVPSPPAALQSLPGPQLLSSLVYPEAGLGLV*PA
X	PALGRPSGAPGS	FPLEHGG*LAGPEQ	YGELRPSSPYGVPSPPAALQSLPGPQLLSSLVYPEAGLGLV*PA
Z	PALGRPSGAPGS	FPLEHGG*LAGPEQ	YGELRPSSPYGVPSPPAALQSLPGPQLLSSLVYPEAGLGLV*PA
		LIM 5	
P	GPFGGPPPMRVL*	AGNGPSSDLSTG	SSGGYPDFPASPASWLDEV DHAQF
M	GPFGGPPPMRVL*	AGNGPSSDLSTG	SSGGYPDFPASPASWLDEV DHAQF
C	GPFGGPPPMRVL*	AGNGPSSDLSTG	SSGGYPDFPASPASWLDEV DHAQF
X	GPFGGPPPMRVL*	AGNGPSSDLSTG	SSGGYPDFPASPASWLDEV DHAQF
Z	GPFGGPPPMRVL*	AGNGPSSDLSTG	SSGGYPDFPASPASWLDEV DHAQF

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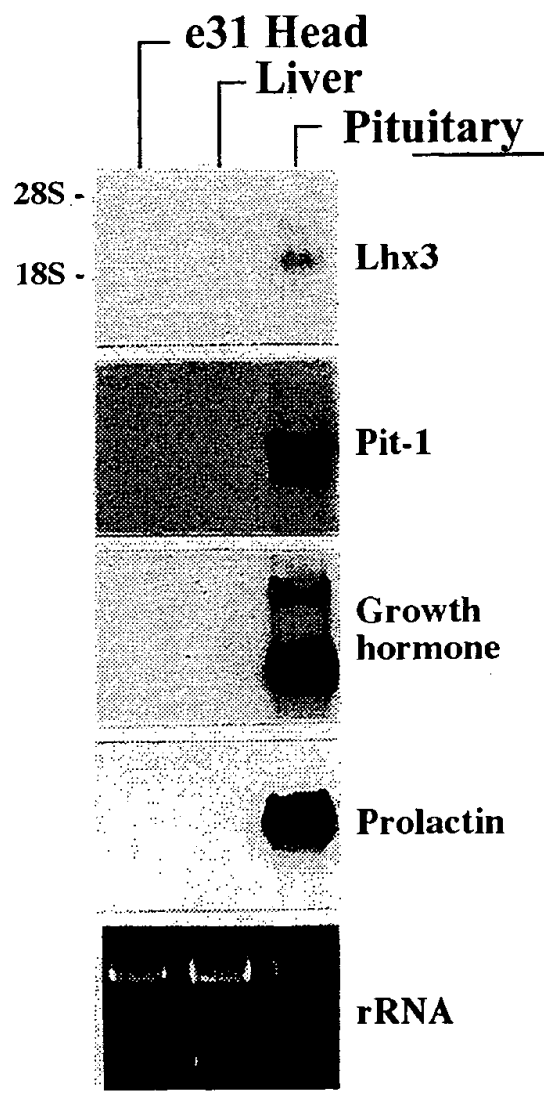


FIG. 2

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FIG. 3Ai

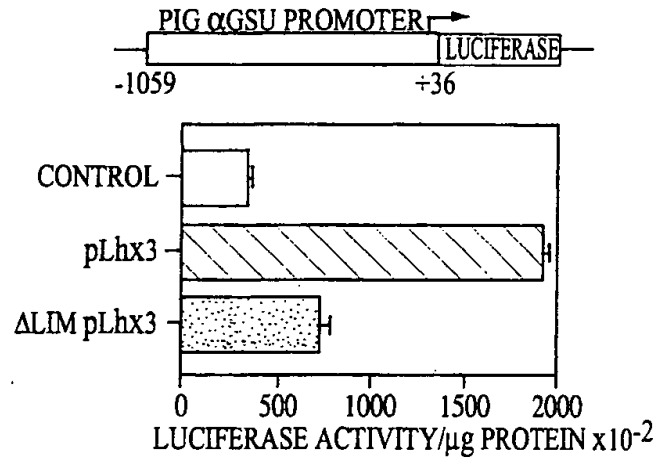


FIG. 3Aii

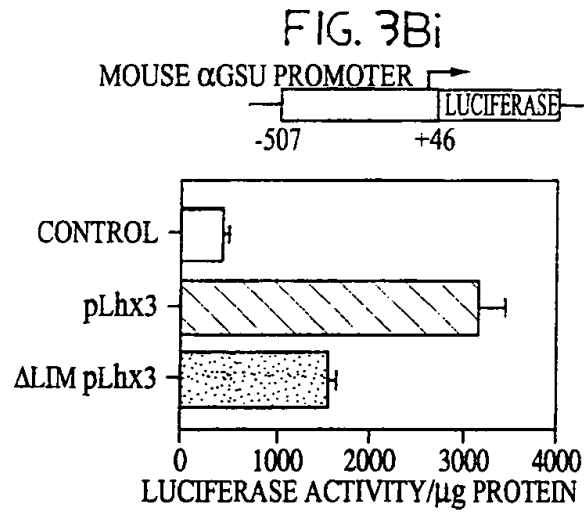


FIG. 3Bii

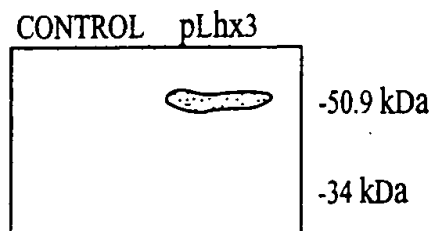


FIG. 3C

[illegible]

WITN-LSG  
GST-plhx3

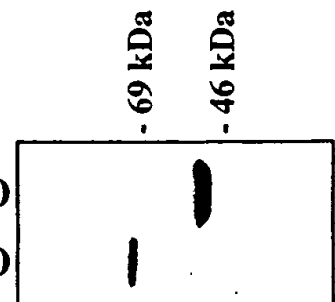


FIG. 4A

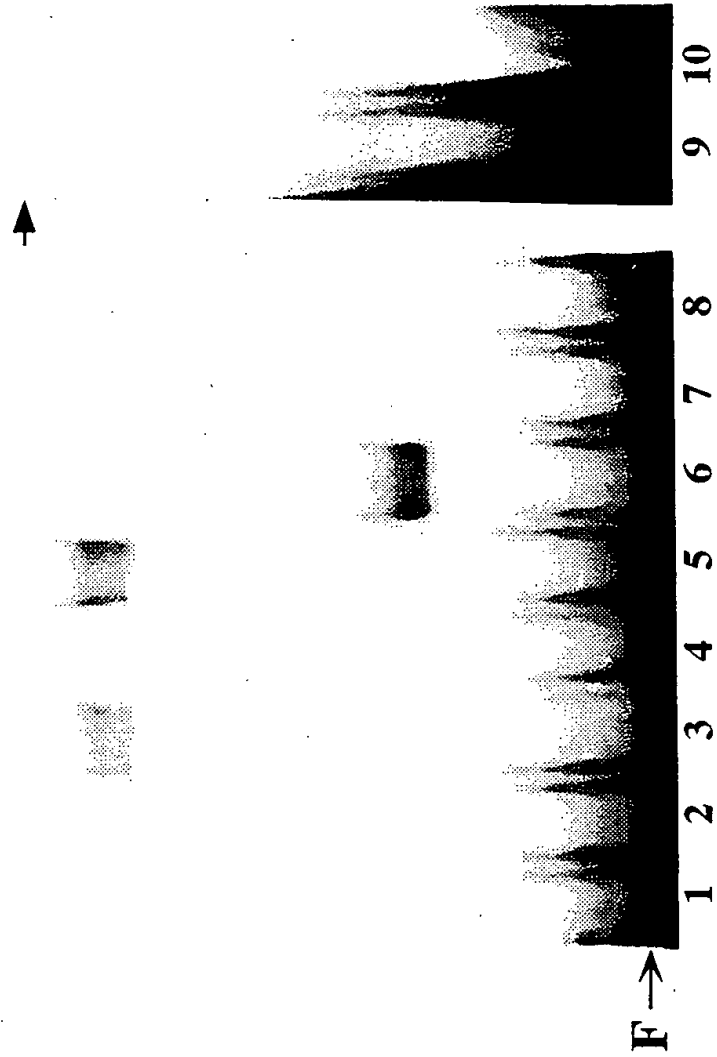


FIG. 5A

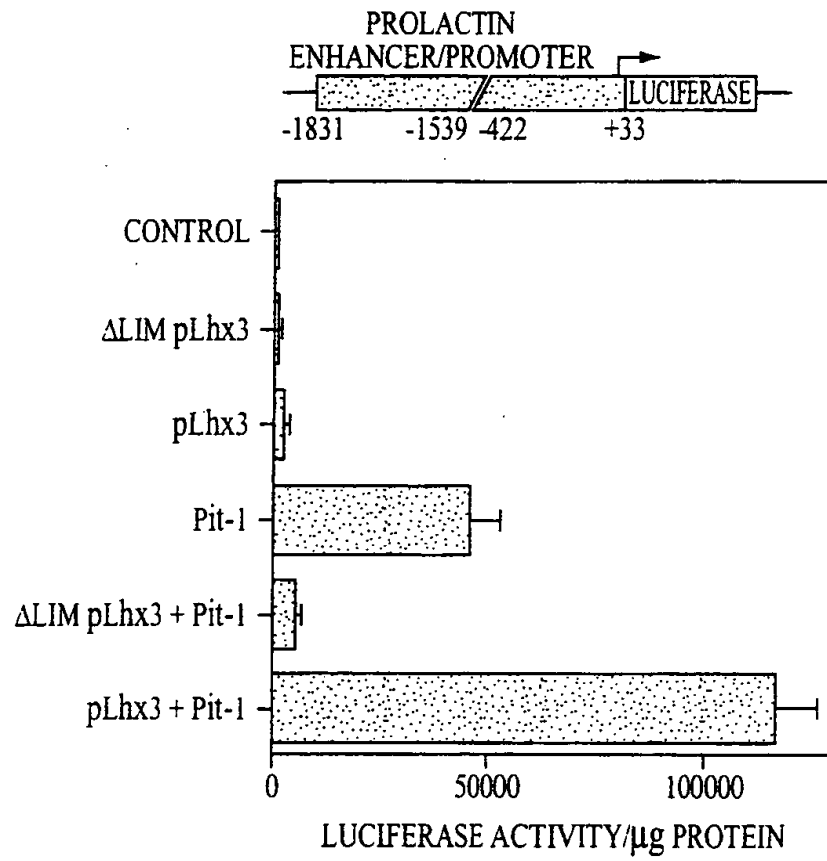


FIG. 5B

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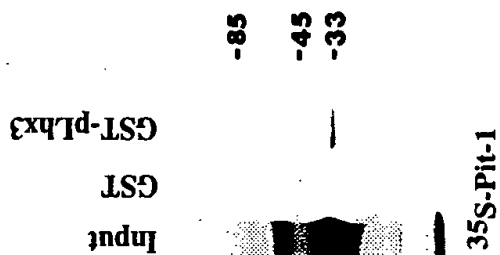


FIG. 6C

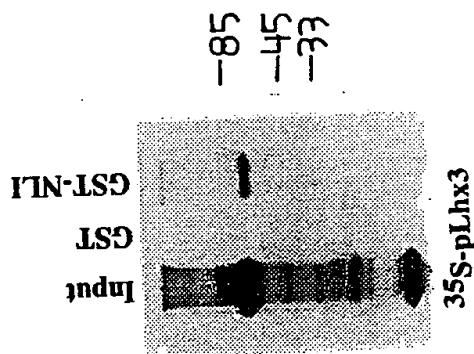


FIG. 6B

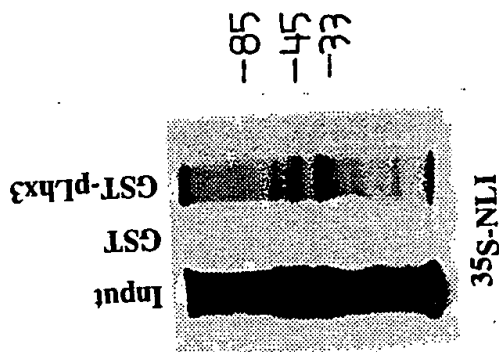


FIG. 6A

FIG. 6A, 6B, 6C

**FIG. 7A**

1 ctgggagggg cggccacagg agctgggagg aaaagagatc cactgtgtg ccggtgcga  
61 ccagcacatc ctggaccgct tcatcctcaa ggctctggac cgccactggc acagcaagtg  
121 cctcaagtgc agtgactgcc acacgccgct ggccgagcgc tgcttcagcc gcgagagag  
181 cctctactgc aaggacgact tcttcaagcg cttcgggacc aagtgcgccg cgtgccagct  
241 gggcatcccg cccaogcagg tggtcgccg cgccaggac ttcgtgtacc acctgcactg  
301 cttcgcctgc gtcgtgtgca agcggcagct ggccacgggc gacgagttct acctcatgga  
361 ggacagccgg ctctgtgtgca aggccgacta cgagaccgcc aagcagcgag aggccgaggc  
421 cacggccaag cggccgcgca cgaccatcac ggccaagcag ctggagacgc tgaagagcgc  
481 ctacaacacg tcgcccaagc ccgcgcgcca cgtgcgcgag cagctctcct ccgagaccgg  
541 cctggacatg cgcgtcgtgc aggtgtggtt ccagaaccgc cgggcccaagg aaaagcggct  
601 caagaaggac gccggccggc agcgtgggg ccagtacttt cgtaacatga agcgcgcccg  
661 cggctggctcc aagtcggaca aggacagcgt ccaggaggag gggcaggaca gtgacgccga  
721 ggtctccttc acagacgagc catccatggc cgaatgggc cctgccaacg gcctctacgg  
781 cggcctgggg gagcctgccc ctgccttggg ccggccctcg ggggcccccgg gcagcttccc  
841 gctggagcac ggaggcctgg cgggcccgga gcagtatgga gagctgcgcc ccagcagccc  
901 ctacggtgtc cctctgtgc ccgcgcctt gcagagcctc cctggcccc agccccctct  
961 ctccagcttg gtgtaccggg aggtggctt ggggcttgtg cccgcggggc cccaggtgg  
1021 gccccaccc atgagggtgc tggcagggaa cggaccagc tccacctat ccacggggag



**FIG. 7B**

1081 cagtggggc taccgcgact tccctgccag tccgcctcc tggctggacg aggtggatca  
1141 cgctcagttc tgactgaggc ccagctccg tggagcacca gacacgagca ctgccccctgg  
1201 ctgggtggtc gggagccgcg ctctccttc ccgaagccct gggcctctaa aggacacagg  
1261 gtcaccggcg gggcacaggc tgaggactgt ccagcccggc ggcctggcc ccgggcagag  
1321 ggactttctc ccggtctcga ggctccttct gggacaaggg gagccacctg gtggctgctc  
1381 agcaagcctt gttttgtaag cagattcctc cctttatcaa ccaaaattaa ctgagtgcct  
1441 gctgctcttt ctagaccgga gtggtcagcc ccgaaagccg gggagggggg ctctccccag  
1501 ccagagcag cacagccctc agactggaag atgctttaat ttttaaaatt aaaaaaat  
1561 acgaactgtg cttccatttc ccagcttcct ctgtctagtt ctgcc

**FIG. 8**

WEGRPQELGGKEIPLCAGCDQHILDRFILKALDRHWSKCLKCSDCHTPLAERCFS  
 RGESLYCKDDFFKRFGTKCAACQLGIPPTQVVRRAQDFVYHLHCFACVVCKRQLAT  
 GDEFYLMEDSRLVCKADYETAKQREAEATAKRPRTTITAKQLETLKSAYNTSPKPA  
 RHVREQLSSETGLDMRVVQVWFQNRRAKEKRLKKDAGRQWQYFRNMKRARGGSK  
 SDKDSVQEEGQSDAEVSFTDEPSMAEMGPANGLYGGLGEPAPALGRPSGAPGSFP  
 LEHGGLAGPEQYGELRPSSPYGVPSSPAALQSLPGPQLLSSLVYPEAGLGLVPAG  
 PPGGPPMRVLAGNGPSSDLSTGSSGGYPDFPASPASWLDEVDDHAQF

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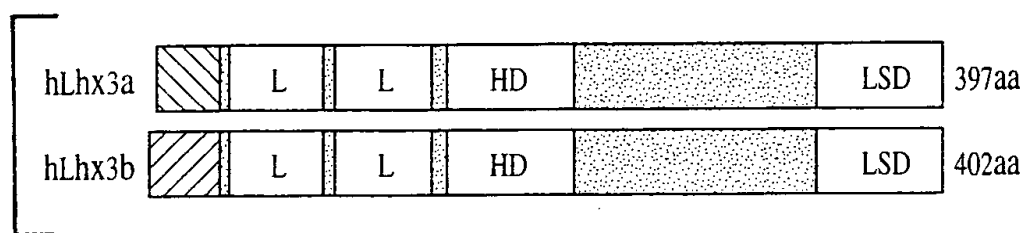


Fig. 9A

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TOP SECRET

FIG. 9B

Ha	1	MLLETGLERDRARPGA--A-AVCTLGGTR	26
Ma	1	...AE.DCH.E...PG.S.L..FSR.P	29
Hb	1	MEARGELGPARESAGGDLALLARRADLRR	31
Mb	1	...D.S.....	31
LIM Domain 1			
H	32	EIPLCAGCDQHILDRFILKALDRHWHSKCLKCSDCHTPLAERCFSRGESVYCKDD	FFKRFGTK
P	12	.....	L.....
M	32	...M.....	V.....
LIM Domain 2			
H	94	CAACQLGIPPTQVVRRAQDFVYHLHCFACVVCKRQLATGDEFYLMEDSRLVCKADYETAKQREAEA	
P	74	.....	.....
M	94	.....	.....
Homeodomain			
H	160	TAKRPRTTITAKQLETLKSAYNTSPKPARHVREQLSSETGLDMRVVQVWFQNRRAKEKRLKKDAG	
P	140	.....	.....
M	160	.....	.....
H	225	RQRWGQYFRNMKRSRGGSKSDKDSVQ-EGQDSDAEVSPDEPSPLAEMGPANGLYGSLGEPTQALGR	
P	205	.....A.....E.....T.....M.....G.....AP.....	
M	225	.....S.....I.....T.....M.D.....S.....AP.....	
H	290	PSGALGNFSLHGGLAGPEQYRELPGSPYGVPPSPAAPQSLPGPQPLLSSLVYPDTSLGLVPSGA	
P	271	...P.S.P.....G...S...L.....EAG.....A.P	
M	290	V.G..S.T.D...T.....I.....N.S.....P	
Lhx3/LIM3-specific domain			
H	356	PGGPPPMRVLACWGPSSDLSTGSSGGYPDFPASPASWLDEV	DHAQF* 402
P	337	.....	* 383
M	356	.....E.S.....	* 402

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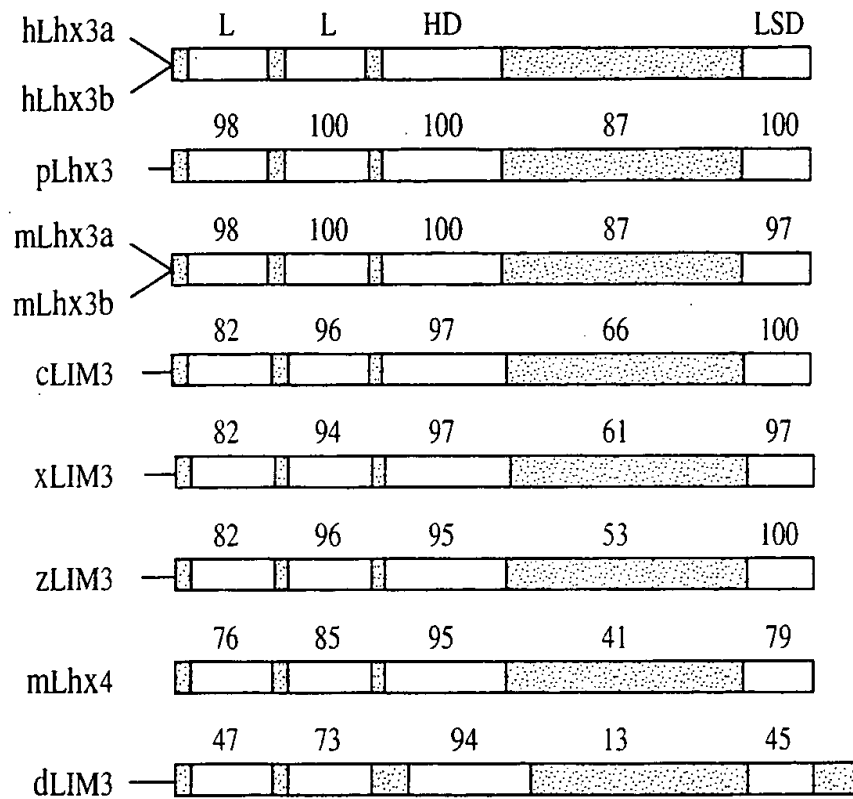


Fig. 9C

**FIG. 10A**

-104 ggcacgagcc ccgcacgacg cggcgggact tgggagcccc gaaccctcca  
-54 ggggacgctg acctcggagg agcgcgtctc gcgccactcg gcctggtggc  
-4 cgcgATGCTG CTGGAACGG GGCTCGAGCG CGACCGAGCG AGGCCCGGGG  
47 CCGCCGCCGT CTGCACCTTG GCGGGGACTC GG  
79 GAGATCCCCG CTGTGCGCTGG CTGTGACCCAG CACATCCTGG ACCGCTTCAT  
129 CCTCAAGGCT CTGGACCGCC ACTGGCACAG CAAGTGTCTC AAGTGCAGCG  
179 ACTGCCACAC GCCACTGGCC GAGCGCTGCT TCAGCCGAGG GGAGAGCGTT  
229 TACTGCAAGG ACGACTTTT CAAGCGCTTC GGGACCAAGT GCGCCGCGTG  
279 CCAGCTGGGC ATCCCGCCCA CGCAGGTGGT GCGCCGCGCC CAGGACTTCG  
329 TGTACCACCT GCACTGCTTT GCCTGCGTCG TGTGCAAGCG GCAGCTGGCC  
379 ACGGGCGACG AGTCTACCT CATGGAGGAC AGCCGGCTCG TGTGCAAGGC  
429 GGACTACGAA ACCGCCAAGC AGCGAGAGGC CGAGGCCACG GCCAAGCGGC  
479 CCGGCACGAC CATCACCGCC AAGCAGCTGG AGACGCTGAA GAGCGCTTAC  
529 AACACCTCGC CCAAGCCGGC GCGCCACGTG CGCGAGCAGC TCTCGTCCGA  
579 GACGGGCGCTG GACATGCGCG TGGTGCAGGT TTGGTTCCAG AACCGCCGGG  
629 CCAAGGAGAA GAGGCTGAAG AAGGACGCCG GCGGCAGCG CTGGGGGCAG  
679 TATTTCCGCA ACATGAAGCG CTCCCGCGGC GGCTCCAAGT CGGACAAGGA  
729 CAGCGTTCAG GAGGGGCAGG ACAGCGACGC TGAGGTCTCC TTCCCCCGATG

779 AGCCTTCCTT GCGGAAATG GGCCCGGCCA ATGGCTCTA CGGAGCTTG  
829 GGGGAACCCA CCCAGGCCCTT GGGCCGGCCC TCGGAGCCCC TGGGCAACTT  
879 CTCCCCTGGAG CATGGAGGCC TGGCAGGCC AGAGCAGTAC CGAGAGCTGC  
929 GTCCCGGCAG CCCCTACGGT GTCCCCCCAT CCCCCCGCGC CCCGCAGAGC  
979 CTCCCCTGGCC CCCAGCCCCCT CCTCTCCAGC CTGGTGTACC CAGACACCCAG  
1029 CTTGGGCCCTT GTGCCCTCGG GAGCCCCCGG CGGGCCCCCA CCCATGAGGG  
1079 TGCTGGCAGG GAACGGACCC AGTTCTGACC TATCCACGGG GAGCAGCGGG  
1129 GGTACCCCCG ACTTCCCTGC CAGCCCCGCC TCCTGGCTGG ATGAGGTAGA  
1179 CCACGCTCAG TTCTGAccca ggcccggctc caccctgcac ctcacacgag  
1229 ggagctgccc ctgggtgggc ggctcggggc tgctggggtt tccgaggaag  
1279 tggggccagg gcgtcaagg agggctggtg ccttcggagc ctccactgc  
1329 cgaccgcaca gctccctctc tgggggctga gggacccacc tggccccctcc  
1379 tctgacacag ggctggcccg ccaggtggcc tccagcaag ccagcctttt  
1429 ttgtaagcaa atttctccc tttattgacc aatlaactga gcacttgctg  
1479 ctatttctag acatgaaatg tcaccttgct gagggccagc ccagcccagc  
1529 atagcccag ggctggaaaa acgctttcat ctctaaaact gagaaatcat  
1579 cataattgtg ctttccactc ccaggctcca tgtgtcttgg agccgctacc  
1629 ccgaggctcc ctctttaggt cggagattgg ccttgctgt cgaggcaaga

**FIG. 10C**

1679 ggctgcagag gcggggacac acctgtgtcc tctcaccac acccaggcc  
1729 cttggtgtcc aggctgcacc cacagatgtc tgttgccaaa cagcctgccc  
1779 tccctgccgg agccggctct gccagcccca gattgggaag tctccccgt  
1829 ggagaaaggt ggggtcctc tgagcctgcc ctgcctctc catcagatcc  
1879 ttgggaaga agtttctggg agatgcccg agctgtgct gcccagaca  
1929 caaaggctgg cctgtgtgta agtcaaagtc actccgcaa acctgaatct  
1979 cgagctacct attggttctg tgaatgttct gtgtcttta tttattctcg  
2029 ggtgatcagc tctttccaag ctcgtgcc

**FIG. 11A**

-119 cgcagcgcgc agcagcacc ggagtcgctt ggacgccgt tcggggctat  
-69 tgcggggtgg cgtcgtggg cccgggaaag ttcgggactg gagagtggcg  
-19 acgccgggcg gcgggaacccA TGGAGCGCG CGGGAGCTG GGCCCGGCC  
32 GGGAGTCGGC GGGAGGCGAC CTGCTGCTAG CACTGCTGGC GCGAGGGCA  
82 GACCTGCGCC GA  
94 GAGATCCCGC TGTGCGCTGG CTGTGACCAG CACATCCTGG ACCGCTTCAT  
144 CCTCAAGGCT CTGGACCGCC ACTGGCACAG CAAGTGTCTC AAGTGCAGCG  
194 ACTGCCACAC GCCACTGGCC GAGCGCTGCT TCAGCCGAGG GGAGAGCGTT



**FIG. 11B**

244 TACTGCAAGG ACGACTTTT CAAGCGCTTC GGGACCAAGT GCGCCGCGTG  
 294 CCAGCTGGGC ATCCCGCCCA CGCAGGTGGT GCGCCGCGCC CAGGACTTCG  
 344 TGTACCACTT GCACTGCTTT GCCTGCGTCG TGTGCAAGCG GCAGCTGGCC  
 394 ACGGGCGACG AGTTCTACCT CATGGAGGAC AGCCGGCTCG TGTGCAAGGC  
 444 GGACTACGAA ACCGCCAAGC AGCAGAGGC CGAGGCCACG GCCAAGCGGC  
 494 CGCGACGAC CATCACCGCC AAGCAGCTGG AGACGCTGAA GAGCGCTTAC  
 544 AACACCTCGC CCAAGCCGGC GCGCCACGTG CGCGAGCAGC TCTCGTCCGA  
 594 GACGGGCTTG GACATGCGCG TGGTGCAGGT TTGGTTCCAG AACCGCCGGG  
 644 CCAAGGAGAA GAGGCTGAAG AAGGACGCCG GCCGCGAGCG CTGGGGGCAG  
 694 TATTTCGGCA ACATGAAGCG CTCCCGCGGC GGCTCCAAGT CGGACAAGGA  
 744 CAGCGTTCAG GAGGGGCAGG ACAGCGACGC TGAGGTCTCC TTCCCCGATG  
 794 AGCCTTCCTT GCGGGAATG GGCCCGGCCA ATGGCCCTCTA CGGAGCTTG  
 844 GGGGAACCCA CCCAGGCCTT GGGCCGGCCC TCGGAGCCC TGGCAACTT  
 894 CTCCCTGGAG CATGGAGGCC TGGCAGGCC AGAGCAGTAC CGAGAGCTGC  
 944 GTCCCCGGCAG CCCCTACGGT GTCCCCCCAT CCCCCGCCG CCCGCAGAGC  
 994 CTCCCTGGCC CCCAGCCCCCT CCTCTCCAGC CTGGTGTACC CAGACACCAG  
 1044 CTTGGGCCCTT GTGCCCTCGG GAGCCCCCGG CGGGCCCCCA CCCATGAGGG  
 1094 TGCTGGCAGG GAACGGACCC AGTTCTGACC TATCCACGGG GAGCAGCGGG

**FIG. 11C**

1144 GGTACCCCG ACTTCCCTGC CAGCCCCGCC TCCTGGCTGG ATGAGGTAGA  
1194 CCACGCTCAG TTCTGACcca ggcccggtc caccctgcac ctcaacagag  
1244 ggagctgccc ctgggtgggc ggctcggggc tgctggggtt tccgaggaag  
1294 tggggccagg gcgtcaaggg agggctgggtg ccttcggagc ctcccactgc  
1344 cgaccgcaca gctccctctc tgggggctga gggacccacc tggccccctcc  
1394 tctgacacag ggctggcccg ccaggtggcc tcccagcaag ccagcctttt  
1444 ttgtaagcaa atttctcccc ttattgacc aatlaactga gcacttgctg  
1494 ctatttctag acatgaaatg tcaccttgct gagggcccagc ccagcccagc  
1544 atagcccgag ggctggaaaa acgctttcat ctctaaaact gagaaatcat  
1594 cataattgtg ctttcacttc ccaggctcca tgtgtcttgg agccgtcacc  
1644 ccgaggctcc ctctttaggt cggagattgg ccttgccctgt cgaggcaaga  
1694 ggctgcagag gcgggggacac acctgtgtcc tcctacccc accccaggcc  
1744 cttggtgtcc aggctgcacc cacagatgtc tgttgccaaa cagcctgccc  
1794 tccctgccgg agccggctct gccagccccca gatggggaag tctccccgct  
1844 ggagaagggt gggggtcctc tgagcctgcc ctgcctcctc catcagatcc  
1894 ttggggaaga agtttctggg agatgcccgcc agctgtgctg gccccagaca  
1944 caaaggctgg cctgtgtgta agtcaaagtc actcccgcaa acctgaatct  
1994 cgagctacct attgggtctg tgaatgttct gtgtctttta ttatttctcg  
2044 ggtgatcagc tctttccaag ctcgtgcc

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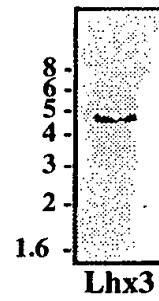


FIG. 12A

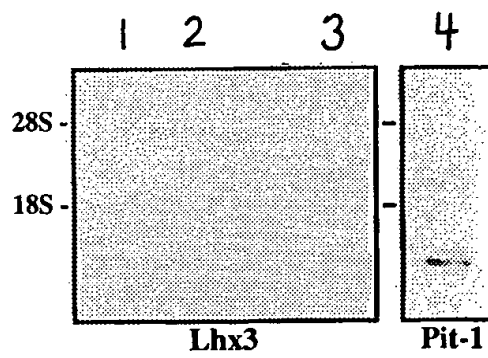


FIG. 12B

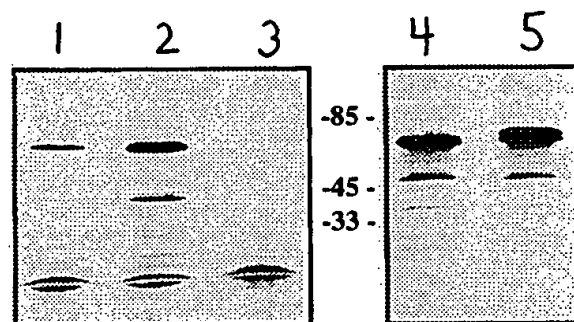


FIG. 12C

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FIG. 13A

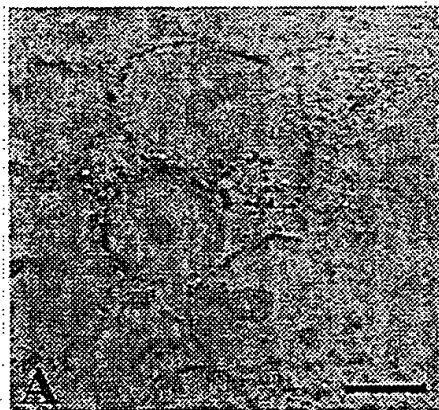


FIG. 13B

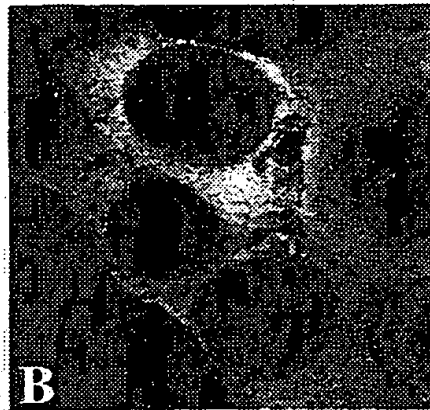


FIG. 13C



FIG. 13D

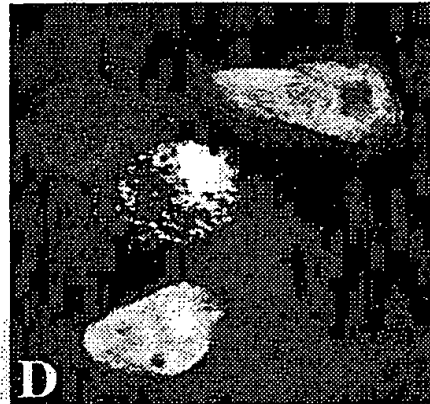


FIG. 13E

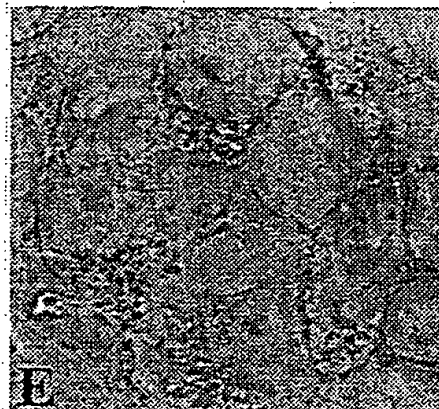
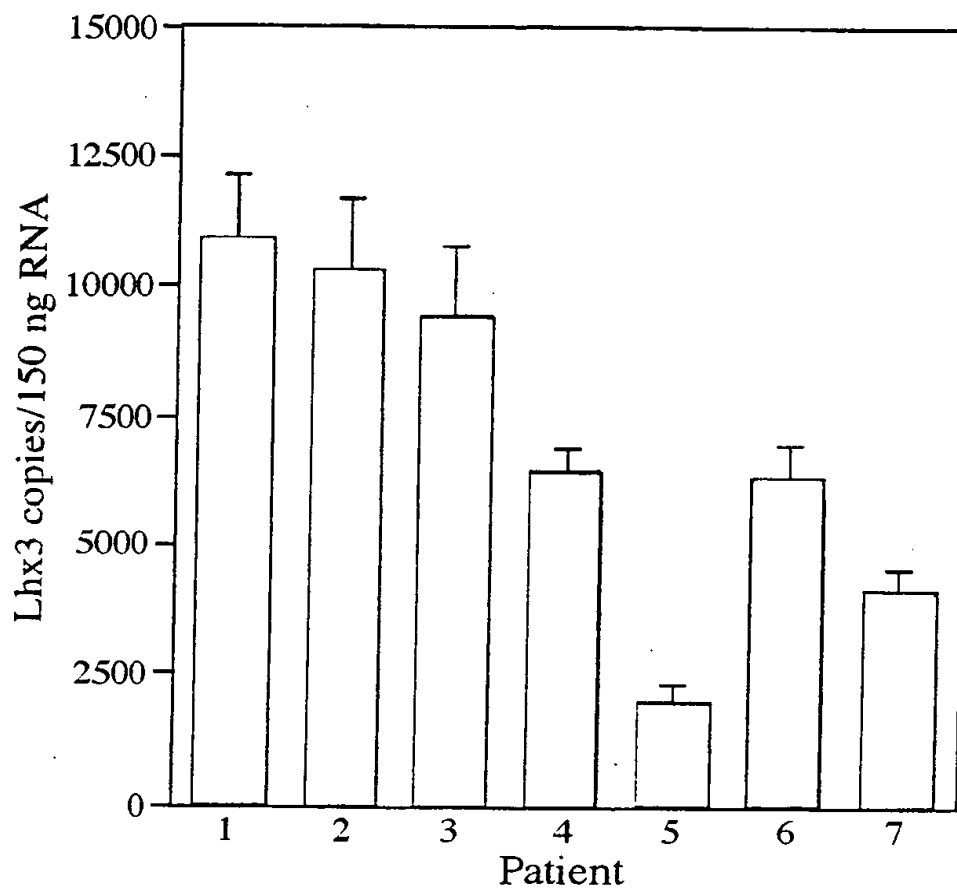
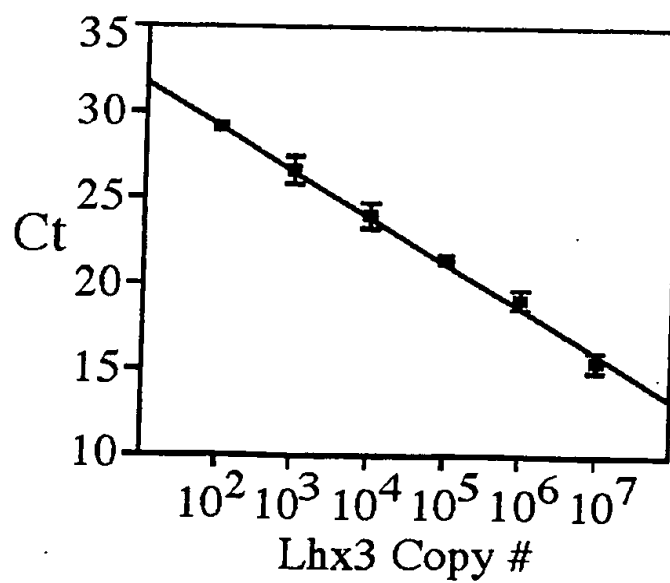


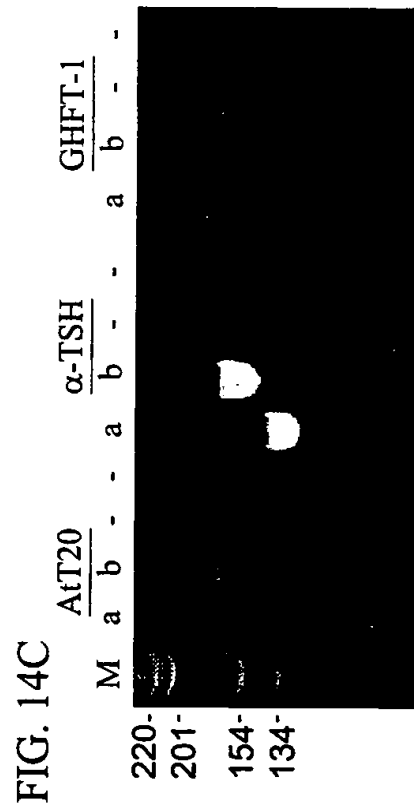
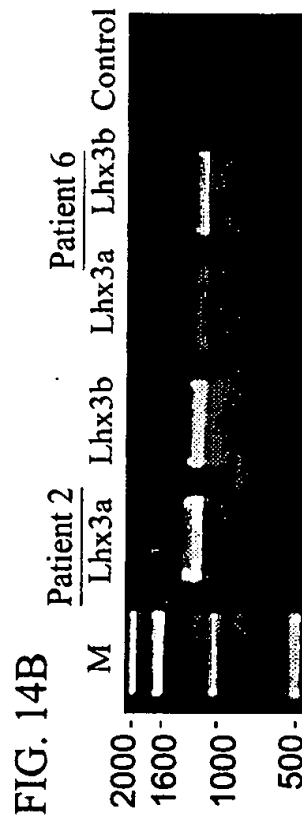
FIG. 13F



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**FIG. 14Ai****FIG. 14Aii**

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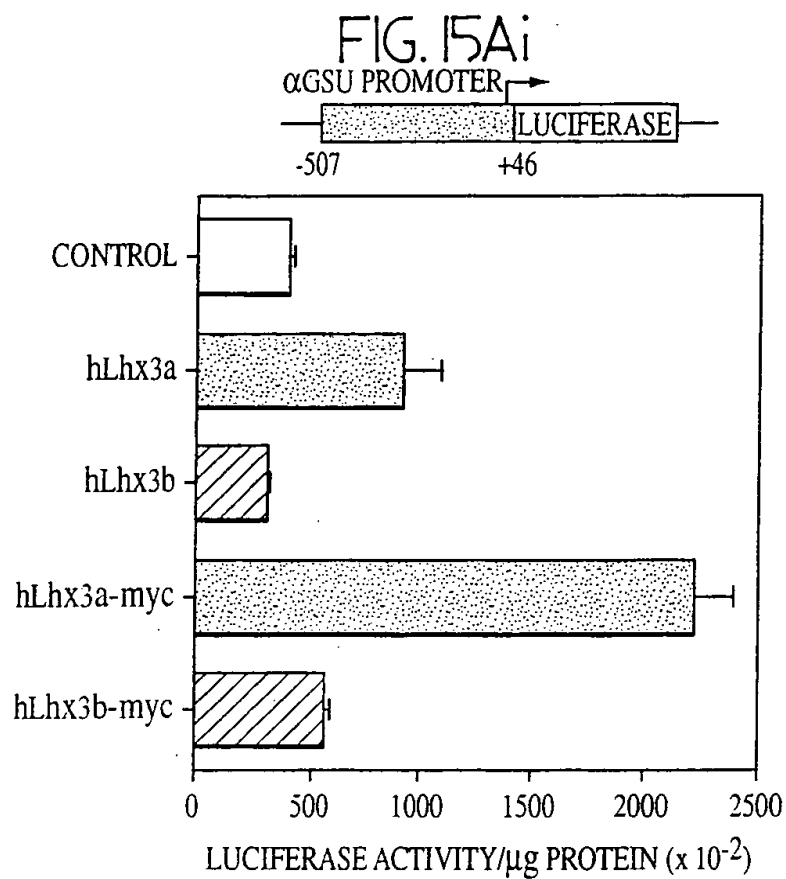
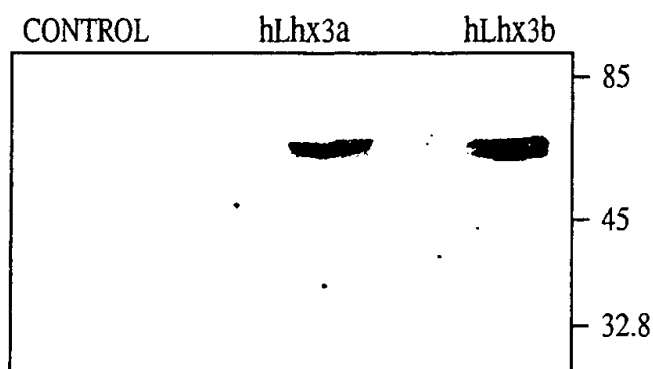
**FIG. 15Aii****Fig. 15B**

FIG. 16Ai

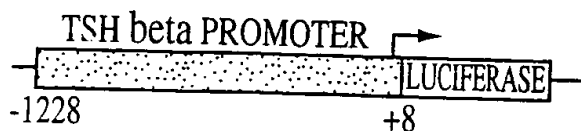


FIG. 16Aii

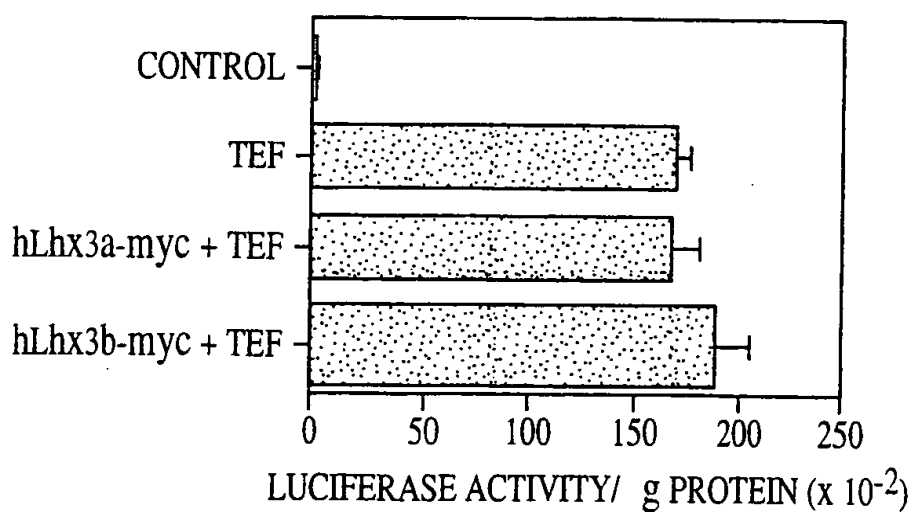
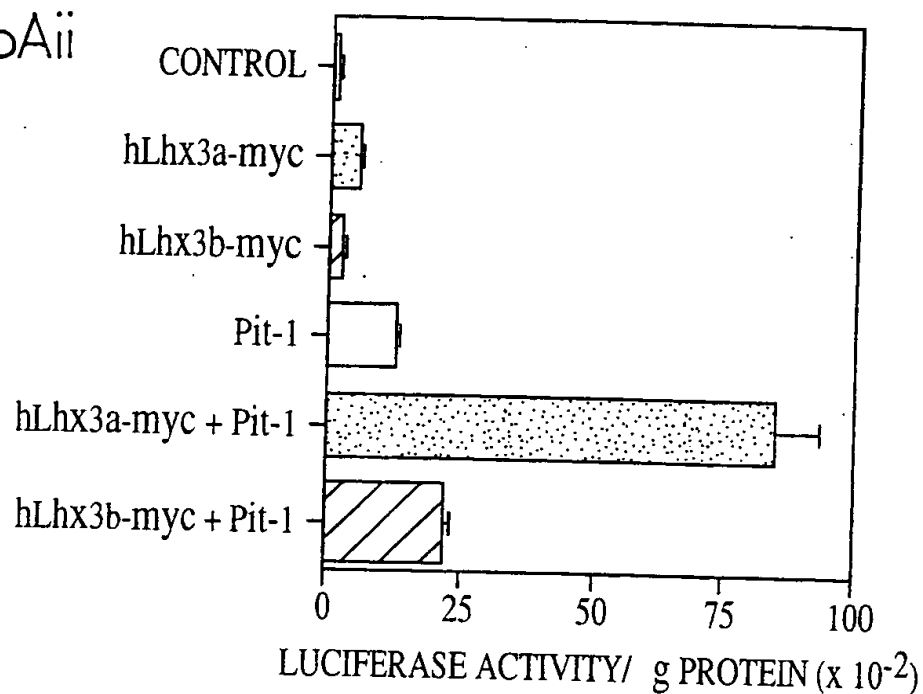


FIG. 16B



FIG. 17A

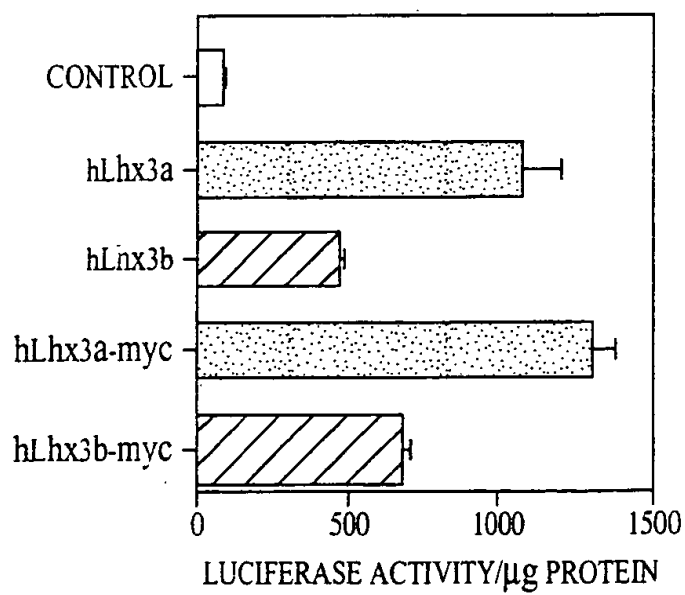
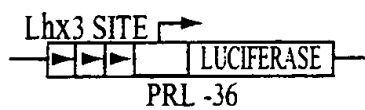


FIG. 17B

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104780" 49222660

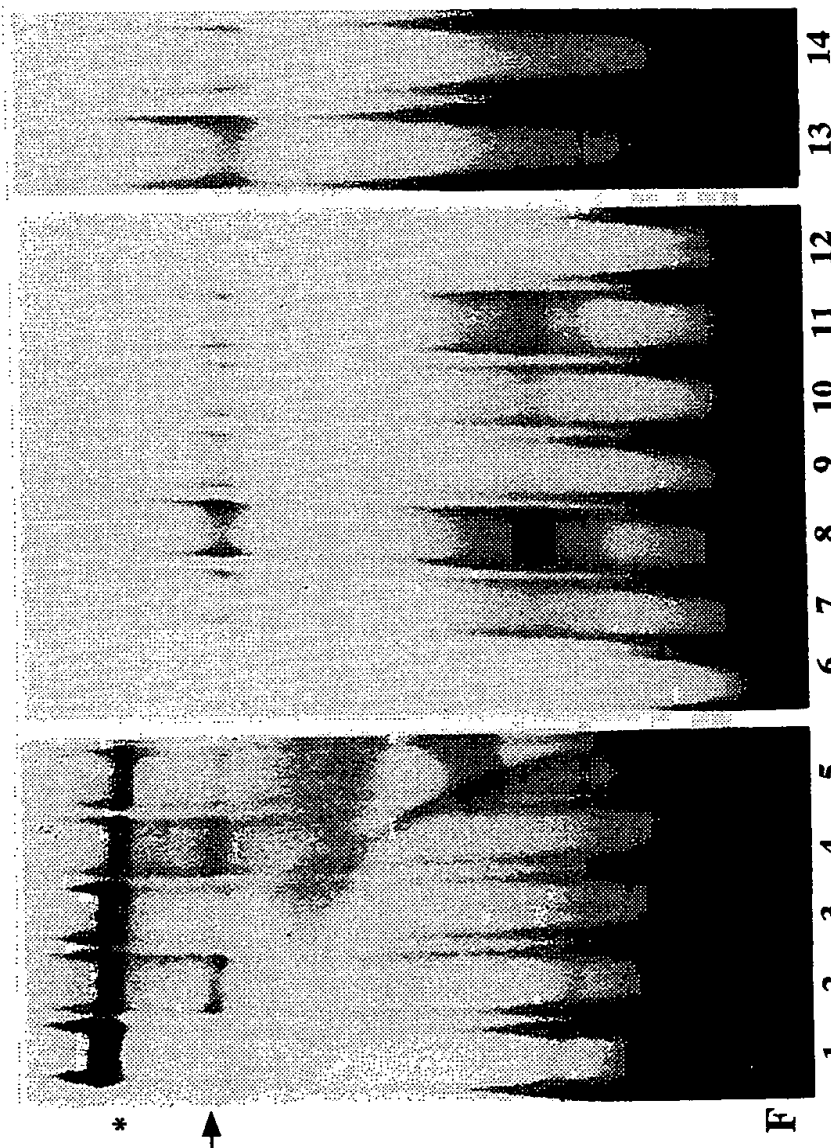


FIG. 18B

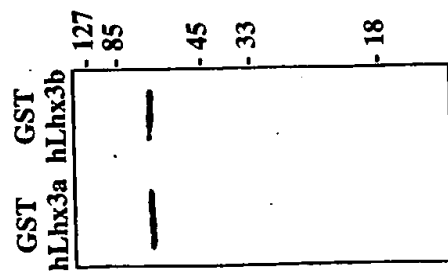


FIG. 18A

**FIG. 19A**

ttgatattta cccggaggc ctgcagacag ggcaccagg agggcagcc  
acatttgcga ggagtcacct aaaagagtgg ccatgacgct taacatgaag  
gagaccgat ggggtgcccc agctccaggt gatggtgaag accggtttcc  
ctatgtttcc tgcgggctt cagagagcag atccccctgg ggtggggtt  
tcatttgagc tccacatgca cctttcttgg cactggcaac attttgtaat  
tgagtattca gcctcgtgaa atggcctggg ctgctttctt gctcacacac  
atttttagac cgatgtcagt tcccccttag ctctgacat aggatgcggt  
gcctgcacac tcccggaact tgcggggcca cttaaagtgg ctggggaaga  
gggtgtgtag gaaaggagg acccctcggc ggcctgagt cctgtgggcc  
ggaggggagg ctggctcgg tgggggtggg aaggtggctt cactgcctcc  
tggtctacga ggtgaccag aacttctcgt tgcccaca GAGATCCC GCTGTGGCT  
GGCTGTGACC AGCACATCCT GGACCGCTTC ATCCTCAAGG CTCTGGACCG  
CCACTGGCAC AGCAAGTGTG TCAAGTGCAG CGACTGCCAC ACGCCACTGG  
CCGAGCGCTG CTTACAGCCGA GGGAGAGCGG TTTACTGCAA GGACGACTTT  
TTCAAGCGCT TCGGGACCAA GTGCGCCGG TGCCAGCTGG GCATCCCGCC  
CACGAGGTG GTGCGCCGG CCCAGGACTT CGTGTACCAC CTGCACTGCT  
TTGCCCTGCGT CGTGTGCAAG CGGCAGCTGG CCACGGGCGA CGAGTTCTAC  
CTCATGGAGG ACAGCCGGCT CGTGTGCAAG GCGGACTACG AAACCGCCAA

**FIG. 19B**

GCAGCGAGAG GCCGAGGCCA CGGCCAAGCG GCCGCGCACG ACCATCACCG  
CCAAGCAGCT GGAGACGCTG AAGAGCGCTT ACAACACCTC GCCCAAGCCG  
GCGGCCACG TGC CGGAGCA GCTCTCGTCC GAGACGGGCC TGGACATGCC  
CGTGGTGCAG GTTGGTTCC AGAACCGCCG GGCCAAGGAG AAGAGGCTGA  
AGAAGGACGC CGGCCGGCAG CGCTGGGGC AGTATTTCG CAACATGAAG  
CGTCCCGCG GCGGCTCCAA GTCGGACAAG GACAGCGTTC AGGAGGGCA  
GGACAGCGAC GCTGAGGTCT CCTTCCCCGA TGAGCCTTCC TTGGCGGAAA  
TGGGCCCGGC CAATGGCCTC TACGGGAGCT TGGGGGAACC CACCCAGGCC  
TTTGGGCCGGC CCTCGGGAGC CCTGGGCAAC TTCTCCCTGG AGCATGGAGG  
CCTGGCAGGC CCAGAGCAGT ACCGAGAGCT GCGTCCCGGC AGCCCCTACG  
GTGTCCCCC ATCCCCGCC GCCCGCAGA GCCTCCCTGG CCCCCAGCCC  
CTCCTCTCCA GCCTGGTGTA CCCAGACACC AGCTTGGGC TTGTGCCCTC  
GGAGCCCCC GCGGGGCCCC CACCCATGAG GGTGCTGGCA GGGAACGGAC  
CCAGTTCTGA CCTATCCACG GGGAGCAGCG GGGGTTACCC CGACTTCCCT  
GCCAGCCCCG CCTCCTGGCT GGATGAGGTA GACCACGCTC AGTTCTGACC  
caggccggc tccaccctgc acctcacacg agggagctgc ccctgggtgg  
gcggctcggg gctgctgggg ttccgagga agtggggcca gggcgtcaag  
ggagggctgg tgccttcgga gcctccact gccgaccgca cagctccctc

**FIG. 19C**

tctgggggct gagggacca cctggccct cctctgacac agggctggcc  
cgccagggtgg cctcccagca agccagcctt ttttgtaagc aaattttctcc  
cctttattga ccaattaaact gagcactgc tgctatttct agacatgaaa  
tgtcaccttg ctgaggccca gccagccca gcatagccc agggctggaa  
aaacgcttct atctctaaaa ctgagaaatc atcataattg tgctttcact  
tcccaggctc catgtgtctt ggagccgtca cccgaggct ccctctttag  
gtcggagatt ggccttgcc gtgaggcaa gaggtgcag aggcggggac  
acacctgtgt cctcctcacc caccgccagg cccttggtgt ccaggctgca  
ccacagatg tctgttgcca aacagcctgc cctccctgcc ggagccggct  
ctgccagccc cagattggga agtctccccg ctggagaagg gtggggctcc  
tctgagcctg ccctgcctcc tccatcagat cctttgggaa gaagtctctg  
ggagatgccc gcagctgtgc gtgccccaga cacaaggct ggcctgtgtg  
taagtcaaag tcaactcccgc aaacctgaat ctcgagctac ctattgggtc  
tgtgaatggt ctgtgtcttt tatttattct cgggtgatca gctctttcca  
agctcgtgcc

**FIG. 20A**

gatcgcttcg gcagcagctg acactcagcc acctgcaccc agcacagccc  
gcacacactt ggctttgcac ccgcgtgtcc ttgccctggc ccttcttggg  
taacaagtgc tgtgcaaat gaaggggcag aaagctggct gcatgggcca  
ctgctcaaaa cggacacatc ggacctgctg ggagctagga gggagggact  
gtggtttctt gtgcccatcc ttctgggcct gggcccttaa agctcacagt  
ccagaagcca taggcagagt ggacagagta ttgctgtgag acccacagg  
agagggacct gcaggatggc atcagccctt ggtcccccac ccttctctgt  
gtgtttctgc gactgccag ggcacccctg cctttgccaa gtccctgtgt  
gccgagggcc acccactgct gtgttcttcc ccgggtggct gcccagggct  
ggtgctggcc cagggccctc tgggcagggg tgggtgcgtc cctctgcctg  
caaggacagg tgggttctgg agagctcacc tgtgtggact ggggcaagag  
gctgaaatat caGAGATCCC GCTGTGCGCT  
GGCTGTGACC AGCACATCCT GGACCGCTTC ATCCTCAAGG CTCTGGACCG  
CCACTGGCAC AGCAAGTGTC TCAAGTGCAG CGACTGCCAC ACGCCACTGG  
CCGAGCGCTG CTTACGCCGA GGGAGAGCG TTTACTGCAA GGACGACTTT  
TTCAAGCGCT TCGGACCACAA GTGCGCCGCG TGCCAGCTGG GCATCCCGCC  
CACGCAGGTG GTGCGCCGCG CCCAGGACTT CGTGTACCAC CTGCACCTGCT  
TTGCCCTGCCGT CGTGTGCAAG CGGCAGCTGG CCACGGGCGA CGAGTTCTAC

CTCATGGAGG ACAGCCGGCT CGTGTGCAAG GCGGACTACG AAACCGCCAA  
GCAGCGAGAG GCCGAGGCCA CGGCCAAGCG GCCGCCACG ACCATCACCG  
CCAAGCAGCT GGAGACGCTG AAGAGCGCTT ACAACACCTC GCCCAAGCCG  
GCCGCCACG TCGCCGAGCA GCTCTCGTCC GAGACGGGCC TGGACATGCG  
CGTGGTGCAG GTTTGGTTCC AGAACCGCCG GGCCAAGGAG AAGAGGCTGA  
AGAAGGACGC CGGCCGCCAG CGCTGGGGC AGTATTTCCG CAACATGAAG  
CGCTCCCGCG GCGGCTCCAA GTCGGACAAG GACAGCGTTC AGGAGGGCA  
GGACAGCGAC GCTGAGGTCT CCTTCCCCGA TGAGCCTTCC TTGGCGGAAA  
TGGGCCCGGC CAATGGCCTC TACGGGAGCT TGGGGGAACC CACCCAGGCC  
TTGGGCCCGC CCTCGGGAGC CCTGGGCAAC TTCTCCCTGG AGCATGGAGG  
CCTGGCAGGC CCAGAGCAGT ACCGAGAGCT GCGTCCCCGC AGCCCCTACG  
GTGTCCCCC ATCCCCCGC GCCCCGCAGA GCCTCCCTGG CCCCCAGCCC  
CTCCTCTCCA GCCTGGTGTGTA CCGAGACACC AGCTTGGGCC TTGTGCCCTC  
GGGAGCCCC GCGGGCCCC CACCCATGAG GGTGCTGGCA GGAACGGAC  
CCAGTTCTGA CCTATCCACG GGGAGCAGCG GGGGTTACCC CGACTTCCCT  
GCCAGCCCCG CCTCCTGGCT GGATGAGGTA GACCACGCTC AGTTCTGACC  
caggccggc tccacctgc acctcacacg agggagctgc ccctgggtgg  
gcggctcggg gctgctgggg ttccgagga agtggggcca gggcgtcaag

**FIG. 20C**

ggagggtgg tgccttoggagcctccact gccgaccgca cagctccctc  
tctgggggt gagggacca cctggccct ccttgacac agggctggcc  
cgccaggtgg cctcccagca agccagcctt ttttgaagc aaatttctcc  
cctttattga ccaattaaact gagcaacttgc tgctatttct agacatgaaa  
tgtcaccttg ctgaggccca gccagccca gcatagccc agggctggaa  
aaacgcttct atctctaaaa ctgagaaaatc atcataattg tgctttcact  
tcccaggctc catgtgtctt ggagccgtca cccgaggct ccctcttag  
gtcggagatt ggccttgctt gtcgaggcaa gaggctgcag aggcggggac  
aacactgtgt cctcctcacc ccacccagg cccttggtgt ccaggctgca  
cccacagatg tctgttgcca aacagcctgc cctccctgcc ggagccggct  
ctgccagccc cagattggga agtctcccgt ctggagaagg gtggggctcc  
tctgagcctg ccctgcctcc tccatcagat ccttgggaa gaagtctctg  
ggagatgccc gcagctgtgc gtgccccaga cacaaggct ggcctgtgtg  
taagtcaaag tactcccgc aaacctgaat ctgagctac ctattgggtc  
tgtgaatgtt ctgtgtcttt tatttattct cgggtgatca gctctttcca  
agctcgtgcc



**FIG. 21A**

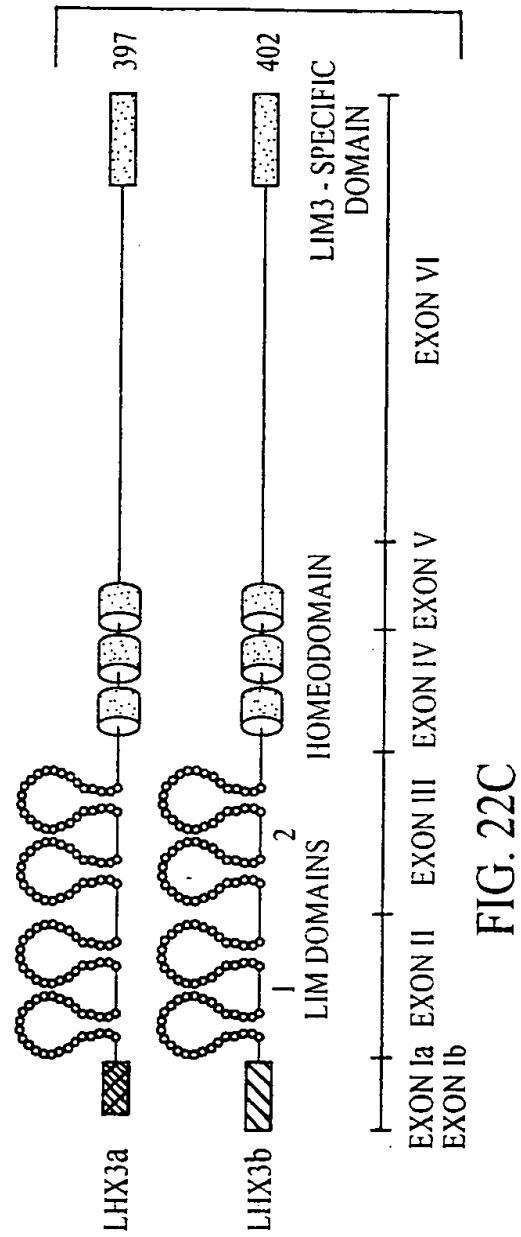
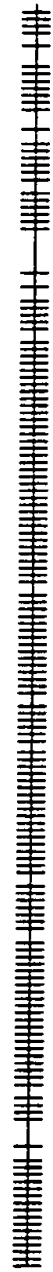
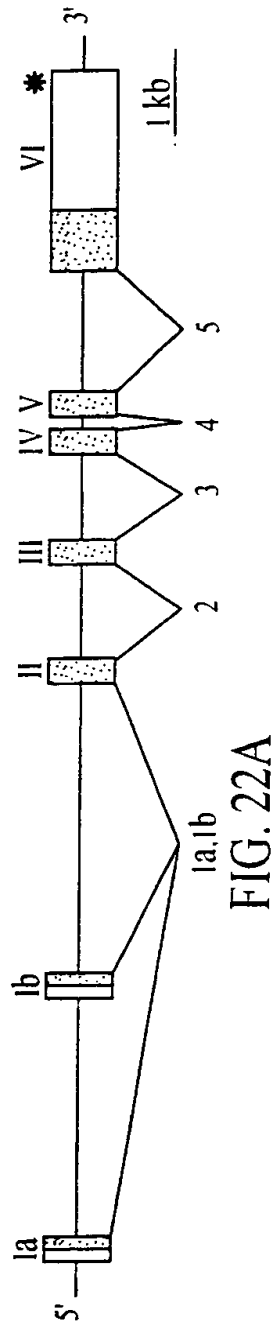
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gcacggcctg ggcactgcct tccagaggct gcatgccaga agGAGATCCC GCTGTGCGCT  
GGCTGTGACC AGCACATCCT GGACCGCTTC ATCCTCAAGG CTCGTGGACCG  
CCACTGGCAC AGCAAGTGTC TCAAGTGCAG CGACTGCCAC ACGCCACTGG  
CCGAGCGCTG CTTACGCCGA GGGAGAGCG TTTACTGCAA GGACGACTTT  
TTCAAGCGCT TCGGGACCAA GTGCGCCGCG TGCCAGCTGG GCATCCCGCC  
CACGCAGGTG GTGCGCCGCG CCCAGGACTT CGTGTACCAC CTGCACTGCT  
TTGCCTGCGT CGTGTGCAAG CGGCAGCTGG CCACGGGCGA CGAGTCTAC  
CTCATGGAGG ACAGCCGGCT CGTGTGCAAG GCGGACTACG AAACCGCCAA  
GCAGCGAGAG GCCAGGGCCA CGGCCAAGCG GCCGCGCACG ACCATCACCG  
CCAAGCAGCT GGAGACGCTG AAGAGCGCTT ACAACACCTC GCCCAAGCCG  
GCGCGCCACG TCGCGGAGCA GCTCTCGTCC GAGACGGGCC TGGACATGCG  
CGTGTGCAG GTTTGGTTCC AGAACCGCCG GGCCAAGGAG AAGAGGCTGA  
AGAAGGACGC CGGCCGGCAG CGCTGGGGC AGTATTTCCG CAACATGAAG  
CGTCCC CGCGCTCCAA GTCGGACAAG GACAGCGTTC AGGAGGGCA  
GGACAGCGAC GCTGAGGTCT CCTTCCCCGA TGAGCCTTCC TTGGCGGAAA  
TGGGCCCGGC CAATGGCCTC TACGGGAGCT TGGGGGAACC CACCCAGGCC  
TTGGGCCCGC CCTCGGGAGC CCTGGGCAAC TTCTCCCTGG AGCATGGAGG

**FIG. 21B**

CCTGGCAGGC CCAGAGCAGT ACCGAGAGCT GCGTCCCGGC AGCCCCCTACG  
GTGTCCCCC ATCCCCCGCC GCCCCGCGAGA GCCTCCCTGG CCCCCAGCCC  
CTCCTCTCCA GCCTGGTGTA CCCAGACACC AGCTTGGGCC TTGTGCCCTC  
GGAGCCCCC GCGGGGCCCC CACCCATGAG GGTGCTGGCA GGAACGGAC  
CCAGTCTGA CCTATCCACG GGGAGCAGCG GGGTTACCC CGACTTCCCT  
GCCAGCCCCG CCTCCTGGCT GGATGAGGTA GACCACGCTC AGTCTGACC  
caggcccggc tccaccctgc acctcacacg agggagctgc ccctgggtgg  
gcggctcggg gctgctgggg ttccgagga agtggggcca gggcgtcaag  
ggagggtgg tgccttcgga gcctccact gccgacgca cagctccctc  
tctgggggct gagggaacca cctggcccc cctctgacac agggctggcc  
cgccagggtg cctcccagca agccagcctt ttttgtaagc aaatttctcc  
cctttattga ccaattaaact gagcacttgc tgctatttct agacatgaaa  
tgtcaccttg ctgaggcca gcccagcca gcatagccc agggctggaa  
aaacgcttc atctctaaa ctgagaaaatc atcataattg tgctttcact  
tcccaggctc catgtgtctt ggagccgtca cccgaggct ccctctttag  
gtcggagatt ggccttgcct gtcgaggcaa gaggtgcag aggcggggac  
acacctgtgt cctcctcacc ccacccagg cccttggtgt ccaggctgca  
cccacagatg tctgttgcca aacagcctgc cctccctgcc ggagccggct

**FIG. 21C**

ctgccagccc cagattggga agtctccccg ctggagaagg gtggggctcc  
tctgagcctg ccctgcctcc tccatcagat ccttgggaa gaagtctctg  
ggagatgccc gcagctgtgc gtgccccaga cacaaaggct ggcctgtgtg  
taagtcaaag tactccccgc aaacctgaat ctgagagctac ctattgggttc  
tgtgaatgtt ctgtgtcttt tattattct cggggtgatca gctctttcca  
agctcgtgcc



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FIG. 23C

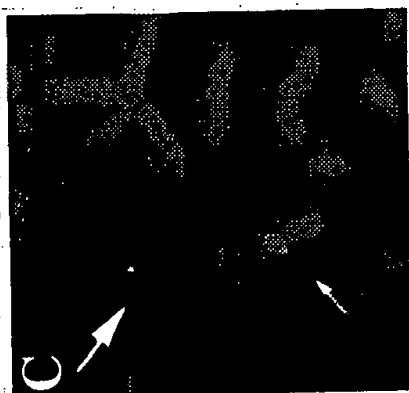


FIG. 23B

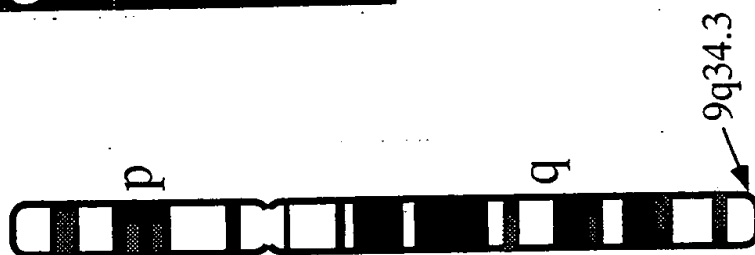
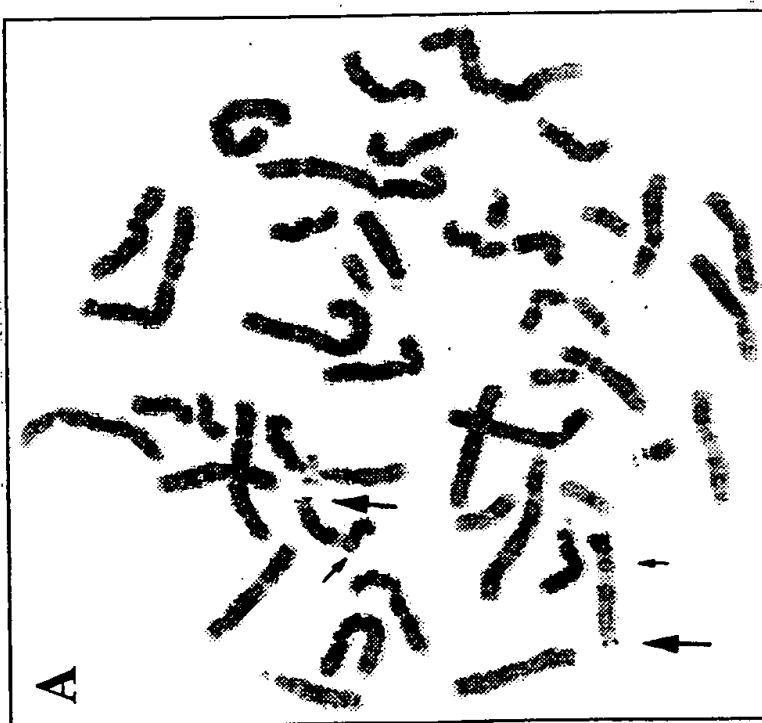


FIG. 23A



**FIG. 24**

1 MLETGLERDRARPGAAAVC TLGGTR  
 27 EIPLCAGCDQHILDRFILKA LDRHWHSKCL KCSDCHTPLA ERCFSRGESV  
 77 YCKDDFFKRF GTKCAACQLG IPPTQVRRRA QDFVYHLHCF ACVVCKRQLA  
 127 TGDEFYLMED SRLVCKADYE TAKQREAEAT AKRPRTTITA KQLETLKSAY  
 177 NTSPKPARHV REQLSSETGL DMRVVQVWFQ NRRAKEKRLK KDAGRQRWGQ  
 227 YFRNMKRSRG GSKSDKDSVQ EGQDSDAEVS FPDEPSLAEMGPANGLYGSL  
 277 GEPTQALGRP SGALGNFSLE HGGLAGPEQY RELRPGSPYG VPPSPAAPQS  
 327 LPGPQPLLSS LVYPDTSLGL VPSGAPGGPP PMRVLAGNGP SSDLSTGSSG  
 377 GYPDFPASPA SWLDEV DHAQ F\*

**FIG. 25**

1 MEARGELGPARESAGGDL L L ALLARRADLR R  
 32 EIPLCAGCDQHILDRFILKA LDRHWHSKCL KCSDCHTPLA ERCFSRGESV  
 82 YCKDDFFKRF GTKCAACQLG IPPTQVRRRA QDFVYHLHCF ACVVCKRQLA  
 132 TGDEFYLMED SRLVCKADYE TAKQREAEAT AKRPRTTITA KQLETLKSAY  
 182 NTSPKPARHV REQLSSETGL DMRVVQVWFQ NRRAKEKRLK KDAGRQRWGQ  
 232 YFRNMKRSRG GSKSDKDSVQ EGQDSDAEVS FPDEPSLAEMGPANGLYGSL  
 282 GEPTQALGRP SGALGNFSLE HGGLAGPEQY RELRPGSPYG VPPSPAAPQS  
 332 LPGPQPLLSS LVYPDTSLGL VPSGAPGGPP PMRVLAGNGP SSDLSTGSSG  
 382 GYPDFPASPA SWLDEV DHAQ F\*

**FIG. 26A**

1 ggcacgagcc cgcacgacg cggcgggact tgggagcccc gaaccctcca  
51 ggggacgctg acctcggagg agcgcgtctc gcgccactcg gcctggtggc  
101 cgcgATGCTG CTGGAACGG GGCTCGAGCG CGACCGAGCG AGGCCCGGGG  
151 CCGCCGCCGT CTGCACCTTG GCGGGGACTC GGGtaagcc ccagcaggac  
201 actgaggaca gaaacggcaa gggcggcaga ggcgcgagga agggggtgcg  
251 tgcagggcca gcggccaggc aaagaaagtc ccgccgctct gcaggcggga  
301 cacagagatg gaaactgcag agagtgagtt tccagatccc aggggtggcgg  
351 ggagggcctg acgctggcct gcaagagtgc gggacagcgg ttggagtgga  
401 ggcccctaga aaaaagggg gcatcgcagg cacagctggg gggcgaatggg  
451 gccgaccaag ggggtgctagg ttccccggt gaccagtgcc cgtcagctct  
501 tgcacacagc ccggcccagg tctctggacc ccacagcagg ggacccaagc  
551 cttgtgtctc ccgcctgaac caccctcccc aagggccatt ccatcaccac  
601 ggacgctggg aaataatgga ggcatgttg gagggctggc cagatgccag  
651 cagggtgggc cgcctcctta acctggcgcc gcccttccc cagtccctgcc  
701 acacacgacc cctgatcgct tcggcagcag ctgacactca gccacctgca  
751 cccagcacag cccgcacaca ctgggctttg caccgcgctg tccttgccct  
801 ggcccttctt gggtaacaag tgctgtgcaa agtgaagggg cagaaagctg  
851 gctgcatggg ccactgctca aaacggacac atcggacctg ctgggagcta  
901 ggaggaggagg actgtgggtt ctgtgcccc tccttctggg cctggggccct

**FIG. 26B**

951 taaagctcac agtccagaag ccataggcag agtggacaga gtattgtctgt  
1001 gagacccaca gggagagggga cctgcaggat ggcatacagcc cctggtcccc  
1051 caacccttcc tgtgtgtttc tgcgcactgc cagggcaccc ctgctttgcc  
1101 aagtcctgtg ctgccgaggg ccaccactg ctgtgttctt ccccggtg  
1151 ctgcccaggg ctggtgctgg ccaggggccc tctgggcagg ggtgggtg  
1201 tccctctgcc tgcaaggaca ggtgggttct ggagagctca cctgtgtgga  
1251 ctggggcaag aggtgaaat atcaggtaag ggaccgtgtt ccaatggagc  
1301 cggagtgtg ggggctggaa atggaagggtg tgccctgggg ctccccagc  
1351 tcggccctc acgaccgag gtcttggctg cgtgtccagg acacagagcc  
1401 tgttctctct caaggattgc ccttctctcc tgagccgtcc ggggccgcag  
1451 ttccaggggt ggagccaga agcctgttag catctggga cggtcoggca  
1501 ccttgcggtt ccggtacgca gccctcggcg ccacactcac cccttctgcg  
1551 tttcgggttg agctccgcc gaccatctgc tgctccgag gccaaacctc  
1601 agcggcggga ggacctgct gccttctcga cccctctccc gggaacctta  
1651 gccctcctgg cgtgtgtctcc agctcaggcc tctgcctctg gcccgctccg  
1701 gcgcaggaag ctgcggggcc gggacgaacg ctggcgggaa gccctgacct  
1751 gggccctccc ttaccggtgc ccgccctcgg gccgggcacg cggggcggcc  
1801 tctgggcacc gcaggtcccg gcgcaaggc gctcagagtc cgcagtggcc  
1851 cgggctggtc tccgcgacc ccggccccgc cccgccccgc ggccccgcc



**FIG. 26C**

1901 cccggccgct ccgccctccg ctcgcccaga ggctccgggc ccagggcg  
 1951 cccgcgggCg cagcggccag cagcaccgg agtcgttgg acgccggttc  
 2001 ggggctattg cggggtggcg tcgctgggcc cgggaaagt cgggactgga  
 2051 gagtggcgac gccgggcggc gggacccATG GAGGCGCGCG GGGAGCTGGG  
 2101 CCCGCCCGG GAGTCGGCGG GAGGCGACCT GCTGCTAGCA CTGCTGGCGC  
 2151 GGAGGGCAGA CCTGGCCGA Ggtgggtgcc cgggccgagc ggctgcaccg  
 2201 gggagaccag gagatcctca ggcctttccg ggcctggccg cggaggctgg  
 2251 caggagctag aggatctggg cgggagtggg cgcgaggacc ccggaacgtc  
 2301 cgcgcctggg cgcctcagcc tgtattgtt gcaggggccc tggcctgggt  
 2351 tgtcaggag tgagtagggt tgtggcactg cgctgctccg gccagggagc  
 2401 tctcgggggt ccagggtggg cttaggagac ctctgcagcc cggagccagc  
 2451 tccctgggct ggaggaggcg cagggagcag tggcggggca gtgaccacgg  
 2501 gacaggaggg tcccgaagaa ggcggcccca gccgactct tccacgttc  
 2551 cagcgggaaca ggtcagatg cagggggccaa ggtcgagctg aactccgacc  
 2601 gtcgggtctcc ccgaagccag gttcagcgt ctgcgcccac agacaccgc  
 2651 tcgggtttatc cccgctcagg gcccgctctgt aggaaaaagc ctctcttc  
 2701 caggccccc agcttctctgg tggcaccact ctactcca gcaactttggt  
 2751 tcttagggaa cctgggcagt tctcctcgac tccggggcca ggtggagccg  
 2801 caggatgggg aaggaggccc cggagccagt ggggagtga agggaccggc

**FIG. 26D**

2851 cggcgggaag ggggttacat ccaggctgtg ggggctcgcg gttccctact  
2901 tatttattta ttttcgacg gttcctggga ggggttgcc gcgggggtg  
2951 gggggcggag agaggaaggg aggaaggagg actgcgcgcc cgcgctcggg  
3001 agagctggcc ggagcggcg ggctggcgtc caggctcgc cgaccccgcc  
3051 atccctgaca caggagcccc cgccagggt ggagtcgcca tgcagcgtaa  
3101 ggctggggtc gcgggcgcgg cgcggggtgg gctggggcgg cttttgcccg  
3151 acgcgggcgc cggcggcgag ctgcggccga ggcgtgtcc ggtccgcggt  
3201 gctgaatccg cgctgtgtcg gcctgtcggg ccgccccgct ccgaccgggt  
3251 cctgcctgc gatcgtgcc cagatgggg accccgggcg cgcagcgggt  
3301 cctcgacgct ccgcacccgg agctgcggtt ttgccggatg cggggcgcat  
3351 tcatacgccg tttcccgcca ctgcgtgggg aggcgcagcc cagtttttc  
3401 cgccggaggt cgaggagacc ccttcctggt gtctctcacc cactgggaga  
3451 tgggctggag ccggcgggggt ccacagccag ggaggcgggt gcaatatgtc  
3501 agtaaatccc ggtcccttca gcgggcactc ctctctcca gagactttt  
3551 ctaagtgaag agggagtcct cagccctga cacctggaaa acccgctcac  
3601 agactcgagg ctccacagg gcacccttg accctcccag tgtggttcct  
3651 ccagggggcc tgcagtattg aagtggggtg tggggggcag aagcagcggg  
3701 aagccagacg tttgagtaac tctgncggtg ttggggggcac ccacgcttga  
3751 cacaagcca gtggatgggt ttgtccagtc cactcataag taattttgog

**FIG. 26E**

3801 gctgccaat gatggggaag gcattgatat ttaccccgga ggcctgcaga  
3851 cagggccacc aggcaggga gccacatttg cgaggagtcc ctagaaagag  
3901 tggccatgac gcttaacatg aaggagacc gatggggtgc ccagctcca  
3951 ggtgatggtg aagaccggtt tccctatgtt tctgccggg cttcagagag  
4001 cagatcccct tggggtgggg ttttcatttg agctccacat gcacccttct  
4051 tggcactggc aacattttgt aattgagtat tcagcctcgt gaaatggcct  
4101 gggctgcttt cttgctcaca cacattttta gaccgatgtc agtttcccct  
4151 tagctcctga cataggatgc ggtgcctgca cactcccgga acttgcgggg  
4201 ccactaagc tggctgggga agagggtgtg tagggaaaagg aggacccctc  
4251 ggcagccctg agtcctgtgg gccggagggg aggcctggctc gcgttggggt  
4301 gggaaagggtg cttcactgcc tcctggtcta cgaggtgacc cagaaactcc  
4351 tcgtgcccac agAGATCCCCG CTGTGCGCTG GCTGTGACCA GCACATCCTG  
4401 GACCGCTTCA TCCTCAAGGC TCTGGACCGC CACTGGCACA GCAAGTGTCT  
4451 CAAGTGCAGC GACTGCCACA CGCCACTGGC CGAGCGCTGC TTCAGCCGAG  
4501 GGGAGAGCGT TTAGTGCAAG GACGACTTTT TCAAgtagc cccgaaacct  
4551 cacctcagtg tgggagcggg gggcacgcct gcccagggga ctctcccct  
4601 cacaatcacc aaggccaggc cctcgaagcc tgcgtctctc gcaatcccag  
4651 cccactcctg tcacccaggc agggcacccct gcggcctggc caaattaagg  
4701 gtggggcctc tccatgggtg ctccctgggt ggctgggcct ggctgggaca

**FIG. 26F**

4751 tcagcaagta ttatttcgaa aaaaaagcaa ttattacct aaatcacaga  
4801 agcagtcatt agagaagata caccctcatt tgtaggattc tactggactt  
4851 agttcctccg aaattggtga tgttttagtt cctaattgctg gcaccacg  
4901 gctctggccc agtggccttc atggctccag ctgtggggtg tgagggactg  
4951 gcccagatg ggtcctctcc ctccgattc accttcccag atccagcatg  
5001 ggtcctgcag gcaatggcgg ctgggctccc cgaggctctt ctgagattga  
5051 ggttcccttc tcagtgggag tgggcagctc tgccccggcg gccaggctgg  
5101 cgaccacct gcagggccgg acagagcctt cctccggggc cgccttccca  
5151 ggcagccgct tgccgctctc caaccgctc ggggcgaaat gagcctcg  
5201 cttccgcgct gagcccggcc ctgtgcgtcc cgcagGCGT TCGGGACCAA  
5251 GTGCGCCGCG TGCCAGCTGG GCATCCCCC CACGCAGGTG GTGCGCCGCG  
5301 CCCAGGACTT CGTGTAACAC CTGCACTGCT TTGCCTGCGT CGTGTGCAAG  
5351 CGGCAGCTGG CCACGGGCGA CGAGTCTAC CTCATGGAGG ACAGCCGGCT  
5401 CGTGTGCAAG GCGGACTACG AAACCGCCAA GCAGCGAGgt cagccgaggg  
5451 gacgacgctc ccacctttcc tggctgaaa aaatggggc tgaggccacg  
5501 ctcaaggggg cgtccgggga aattctctcc ccaagcgctc actaaggggg  
5551 cctgggctag ggcggtgtag gcagcaggaa gccgagggccg ggaacggcgg  
5601 agtcacggac agaccgcgct cccgaaccgc ttcgttcggt ccgaagtgtg  
5651 cggcttttcg cccctggtcg gaattatcg cctaaattct tggccgcgaa

**FIG. 26G**

5701 ggctgggcca taccacacc cttagaataa aggggagccc gcggggaaat  
 5751 cagggtgctt ggagaaagga gccaaggctg aaggcggggg cgccgtggag  
 5801 gtgcgathtt agggaaggcg ccgccccgc cccgcggca gaacccgcc  
 5851 tccgccggcg cccctccac ccagccccg gtgctgccg ttttgccaa  
 5901 tcgctcccag cgcccgccg ttccgagaag cctgtgggc gggatggggg  
 5951 tgggcacctg aggccccgac gtccccgcg cgccggggt gggagggtg  
 6001 gggtcggcc ggggccggag gggctgccg gcctaccgc tcgccgccg  
 6051 cgcagAGGCC GAGGCCACGG CCAAGCGCC GCGACGACC ATCACCGCCA  
 6101 AGCAGCTGGA GACGCTGAAG AGCGCTTACA ACACCTCGCC CAAGCCGGCG  
 6151 CGCCACGTGC GCGAGCAGCT CTCGTCCGAG ACGGGCCTGG ACATGCGTGT  
 6201 GGTGCAGgtc agcgtcgc cctgtccc tccgccgcg ggccttgggg  
 6251 gcccccgcag agccgggcgg ccgctcacc cgccccgcc ccagGTTGG  
 6301 TTCCAGAACCC GCCGGGCCAA GGAGAAGAGG CTGAAGAAGG ACGCCGGCCG  
 6351 GCAGCGCTGG GGGCAGTATT TCCGCAACAT GAAGCGCTCC CGCGCGGCT  
 6401 CCAAGTCGGA CAAGGACAGC GTTCAGGAGG GCGAGGACAG CGACGCTGAG  
 6451 GTCTCCTTCC CCGgtaggcg gaggatcgc ggagctcggg ggggggacga  
 6501 gcgcgcgtcg gcggggtcgc aggggtccca gggagccgc ggatctgaat  
 6551 tccccatgga gttagtggac tccttaagt ctactttcaa aagcatttca  
 6601 cttacagaac ctgctcccc agcacctcc ccgcctggg tggccactcc

**FIG. 26H**

6651 ggaccactgc ttttcccctg gtggggacac aatccctgtg gcccgacctg  
6701 tccccaagct gggcgctac gggctttctc atgggggggt gggcgtgtcc  
6751 aggccgtctc tctggctcct agcccttgca gtgatttta ggagaatggg  
6801 cagtgcattt cgggaaagac tgaagtgaag tcccagctgc ttggagttgg  
6851 gggagggggc tacctgggggt caggagaga aggttccata cccttctgtg  
6901 ggggctggat tatttatttc attctcggg caccggggat gctgcgtccc  
6951 catctgttga tgcccatcct cagaatgtgg acaagacact ctcttttggg  
7001 ctgcctcgtg acccgggcta ctactcagc cactctggaa ctaaataccc  
7051 ttgtctgcaa aatgtgggtg gtggtatctg tgcccccttc ctaggctgct  
7101 gtggggctgg tcctgaaagc ctgggccctg gctgggctgt tcctgactct  
7151 gatcccacca ggcctgagac acctgggctg actcaggggt gagggcagtg  
7201 gaggggcagg gacagccatg ctccaacagt agaagggggc tgtgctgacc  
7251 tgtcatgtgg tgtggggcag ccactcttc tctgaccag ggggtgcctcc  
7301 gcctgcagga tgggactctg aggggccgca ggtggagggc aggcgctgac  
7351 tgagcctctg cttctgttgc agATGAGCCT TCCTTGCGG AAATGGCCCC  
7401 GGCCAATGGC CTCTACGGGA GCTTGGGGA ACCCACCAG GCCTTGGGCC  
7451 GGCCCTCGG AGCCCTGGG CACTTCTCCC TGGAGCATGG AGCCCTGGCA  
7501 GGCCCAGAGC AGTACCGAGA GCTGCGTCCC GGCAGCCCCCT ACGGTGTCCC

**FIG. 26I**

7551 CCCATCCCCC GCCGCCCCGC AGAGCCTCCC TGGCCCCCAG CCCCTCCTCT  
7601 CCAGCCTGGT GTACCCAGAC ACCAGCTTGG GCCTTGTGCC CTCGGGAGCC  
7651 CCCGGCGGC CCCCACCCAT GAGGGTGCTG GCAGGGAACG GACCCAGTTC  
7701 TGACCTATCC ACGGGAGCA GCGGGGTTA CCCGACTTC CCTGCCAGCC  
7751 CCGCCTCCTG GCTGGATGAG GTAGACCACG CTCAGTTCTG Accagggccc  
7801 ggctccaccc tgcacctcac acgaggagc tgcccctggg tgggcggctc  
7851 ggggctgctg ggggtttccga ggaagtggg ccagggcgctc aagggagggc  
7901 tgggtgcctc ggagcctccc actgccgacc gcacagctcc ctctctgggg  
7951 gctgagggac ccacctggcc cctcctctga cacagggctg gcccgccagg  
8001 tggcctccca gcaagccagc cttttttgta agcaaatctc tcccctttat  
8051 tgaccaatta actgagcact tgctgctatt tctagacatg aaatgtcacc  
8101 ttgctgaggc ccagcccagc ccagcatagc ccgagggctg gaaaaacgct  
8151 ttcatctcta aaactgagaa atcatcataa ttgtgcttct acttcccagg  
8201 ctccatgtgt cttggagccg tcaccccag gctccctctt taggtcggag  
8251 attggccttg cctgtcgagg caagaggctg cagaggggg gacacacctg  
8301 tgtctccgg gagaggcccc ctctctccc cagaccacag ggggcctctc  
8351 tgcctccagc ccacacctcc ccgggagaag ctttcccca tccccaggtc  
8401 tctagatcat tctgttctcg agtatcctgt ggaggaggca aaaatgcctg

FIG. 26J

**FIG. 26J**

8451 gcgccccttc tctccaagct caattctcta agcccctcag ggtctctcc  
8501 tcacccacc ccaggccctt ggtgtccagg ctgcaccac agatgtctgt  
8551 tgccaaacag cctgccctcc ctgccggagc cggctctgcc agccccagat  
8601 tgggaagtct ccccgctgga gaagggtggg gctcctctga gcctgccctg  
8651 cctcctccat cagatccttt gggaagaagt ttctgggaga tgcccgcagc  
8701 tgtgcgtgcc ccagacacaa aggctggcct gtgtgtaagt caaagtcact  
8751 cccgcaaac tgaatctcga gctacctatt ggttctgtga atgttctgtg  
8801 tcttttattt attctcgggt gatcagctct tccaagact tcaaaaaant  
8851 gtcagttacc tcgtgcc

**FIG. 27A**

1 atgctgctgg aaacggagct ggcgggcgac cgagatcggc ccggggcccc  
51 cgcagccgcc gctgtctgca ccttaccggg gactcgggag atccactgt  
101 gtgccggctg cgaccagcac atcctggacc gcttcatcct caaggctctg  
151 gaccgccact ggcacagcaa gtgcctcaag tgcagtgact gccacagcc  
201 gctggccgag cgctgcttca gccgcggaga gaggctctac tgcaaggacg  
251 acttcttcaa gcgcttcggg accaagtgcg ccgcgtgcc a gctggggcatc  
301 ccgcccacgc aggtggtgcg ccgcgccccag gacttcgtgt accacctgca



**FIG. 27B**

351 ctgcttcgcc tgcgtcgtgt gcaagcggca gctggccacg ggcgacgagt  
401 tctacctcat ggaggacagc cggctcgtgt gcaaggccga ctacgagacc  
451 gccaaagcag gagaggccga ggcacggcc aagcggccgc gcacgaccat  
501 cacggccaag cagctggaga cgctgaagag cgcctacaac acgtcgccca  
551 agccgcgcgc ccacgtgcgc gacagctct cctccgagac cggcctggac  
601 atgcgcgtcg tgcaggtgtg gttccagaac cgcggggcca aggaaaagcg  
651 gctcaagaag gacgccggcc ggcagcgtg gggccagtac ttctgtaaca  
701 tgaagcgcgc ccgcggtggc tccaagtccg acaaggacag cgtccaggag  
751 gaggggcagg acagtgacgc cgaggtctcc ttcacagacg agccatccat  
801 ggccgaaatg ggccctgccca acggcctcta cggcggcctg ggggagcctg  
851 cccctgcctt gggccggccc tcgggggccc cgggcagctt cccgctggag  
901 cacggaggcc tggcggggccc ggagcagtat ggagagctgc gcccagcag  
951 cccctacggt gtcccctcgt cgcgcgcgc cctgcagagc ctccctggcc  
1001 cccagccccct cctctccagc ttggtgtacc cggaggctgg ctgggggctt  
1051 gtgcccgcgg ggccccccagg tggccccca ccatgaggg tgctggcagg  
1101 gaacggaccc agctccgacc tatccacggg gagcagtggg ggctacccc  
1151 acttccctgc cagtcccgc tccggctgg acgaggtgga tcacgctcag  
1201 ttctgactga ggccccagct ccgtggagca ccagacacga gcaactgcccc

**FIG. 27C**

1251 tggctgggtg gtcgggagcc gcgctctcct ttccgaagc cctgggcctc  
1301 taaaggacac aggtcaccg gcggggcaca ggctgaggac tgtccagccc  
1351 ggcggccctg gccccgggca gaggacttt ctcgggtct cgaggctcct  
1401 tctgggacaa ggggagccac ctggtggctg ctcaagcaagc cttgttttgt  
1451 aagcagattc ctccctttat caacaaaat taactgagt cttgctgctc  
1501 tttctagacc ggagtgtca gccccgaag ccggggaggg gggctctccc  
1551 cagcccagag cagcacagcc ctcaactgg aagatgctt aatttttaa  
1601 attaaaaaat aatacgaact gtgcttccat ttccagctt cctctgtcta  
1651 gttctgcc

**FIG. 28**

1 MLLTELAGD RDRPGAPAAA AVCTLPGTRE IPLCAGCDQH ILDRFILKAL  
51 DRHWSKCLK CSDCHTPLAE RCFSRGESLY CKDDFFKFRG TKCAACQLGI  
101 PPTQVVRRAQ DFVYHLHCFA CVVCKRQLAT GDEFYLMEDS RLVCKADYET  
151 AKQREAEATA KRPRTTITAK QLETLKSAYN TSPKPARHVR EQLSSETGLD  
201 MRVVQVWFQN RRAKEKRLKK DAGRQRWGQY FRNMKRARGG SKSDKDSVQE  
251 EGQSDAEVS FTDEPSMAEM GPANGLYGLL GEPAPALGRP SGAPGSFPLE  
301 HGGLAGPEQY GELRPSSPYG VPSSPAALQS LPGPQPLLSS LVYPEAGLGL  
351 VPAGPPGGPP PMRVLAGNGP SSDLSTGSSG GYPDFPASPA SWLDEVVHAQ  
401 F

**FIG. 29A**

1 atggaagcgc gcggggagct gggccccagc cgggagtcgg cgggcggcga  
51 cctgctgctg gcgctgctgg cgcggaggga ggacctgcgc cgagagatcc  
101 cactgtgtgc cggctgcgac cagcacatcc tggaccgctt catcctcaag  
151 gctctggacc gccactggca cagcaagtgc ctcaagtgca gtgactgcca  
201 cacgccgtg gccgagcgtt gcttcagccg cggagagagc ctctactgca  
251 aggacgactt cttcaagcgc ttcgggacca agtcgcgcgc gtgccagctg  
301 ggcattccgc ccacgcaggt ggtgcgccgc gccaggact tcgtgtacca  
351 cctgcactgc ttcgcctgcg tcgtgtgcaa gcggcagctg gccacgggcg  
401 acgagttcta cctcatggag gacagccggc tcgtgtgcaa ggccgactac  
451 gagaccgcca agcagcgaga ggccgaggcc acggccaaagc ggccgcgcac  
501 gaccatcacg gccaaagcac tggagacgct gaagagcgcc tacaacacgt  
551 cgcccaagcc cgcgcgccac gtgcgcgagc agctctcctc cgagaccggc  
601 ctggacatgc gcgtcgtgca ggtgtggttc cagaaccgcc gggccaaagg  
651 aaagcggctc aagaaggacg ccggccggca gcgctggggc cagtacttcc  
701 gtaacatgaa gcgcgccccg ggtggctcca agtcggacaa ggacagcgtc  
751 caggaggagg ggcaggacag tgacgccgag gtctccttca cagacgagcc  
801 atccatggcc gaaatgggc ctgccaaacgg cctctacggc ggcctggggg  
851 agcctgcccc tgccttgggc cggccctcgg gggccccggg cagcttcccg

**FIG. 29B**

901 ctggagcacg gaggcctggc gggccggag cagtatggag agctgcgccc  
951 cagcagcccc tacggtgtcc cctcgtcgcc cgcgccttg cagagcctcc  
1001 ctggccccc gccctcctc tccagcttgg tgtaccgga ggctggcttg  
1051 gggcttgtc ccgcggggc ccaggtggg ccccaacca tgaggggtgct  
1101 ggcagggaac ggaccagct ccgacctatc cacggggagc agtgggggct  
1151 acccgactt cctgccagt ccgcctcct ggctggacga ggtggatcac  
1201 gctcagttct gactgaggc ccagctccgt ggagcaccag acacgagcac  
1251 tgccctggc tgggtggtcg ggagccggc tctcctttcc cgaagccctg  
1301 ggcctctaaa ggacacaggg tcaccggcg ggacaggct gaggactgtc  
1351 cagcccgcg gccctggccc cgggcagagg gactttctcc cggctctcga  
1401 gctccttctg ggacaaaggg agccacctgg tggctgctca gcaagccttg  
1451 ttttgaagc agattcctcc ctttatcaac caaaattaac tgagtgcttg  
1501 ctgctcttct tagaccggag tggtcagccc ccgaagccgg ggaggggggc  
1551 tctccccagc ccagagcagc acagccctca gactggaaga tgctttaatt  
1601 tttaaaatta aaaaataata cgaactgtgc ttccatttcc cagcttcctc  
1651 tgtctagttc tgcc

**FIG. 30**

1 MEARGELGPS RESAGGDL L L ALLARREDLR REIPLCAGCD QHILDRFILK  
51 ALDRHWHSKC LKCDCHTPL AERCFSRGES LYCKDDFFKR FGTKCAACQL  
101 GIPPTQVRR AQDFVYHLHC FACVVCKRQL ATGDEFYIME DSRLVCKADY  
151 ETAKQREAEA TAKRPRTTIT AKQLETLKSA YNTSPKPARH VREQLSSETG  
201 LDMRVVQVWF QNRRAKEKRL KKDAGRQRWG QYFRNMKRAR GGSKSDKDSV  
251 QEEGQSDAE VSFTDEPSMA EMGPANGLYG GLGEPAPALG RPSGAPGSFP  
301 LEHGGLAGPE QYGELRPSSP YGVPSSPAAL QSLPGQPILL SSLVYPEAGL  
351 GLVPAGPPGG PPFMRVLGN GPSSDLSTGS SGGYPDFPAS PASWLDEVVDH  
401 AQF